

REMARKS

Claims 1-10 are active. Claim 10 is new. Claims 1-6, 9 and 10 are rejected under 35 USC 102 as being anticipated by Yamamoto et al. Applicants appreciate that claims 7 and 8 are deemed to contain allowable subject matter.

Minor amendment is made to various ones of the claims in the interest of clarity and consistency not related to the substantive rejection. For example the conductive tracks are described as electrically conductive. Plainly this is what is intended by the term "conductive." The amendment only makes it clear that it is electrical conductivity that is being referred to as there are other types of conductivities of materials not related to the claimed subject matter. Others of the claims are amended to be consistent and also to improve their form. New claim 10 further defines the material of the conductor track as being metallic. None of the amendments are new matter or raises new issues.

Applicants traverse the rejection over Yamamoto. This reference does not suggest much less anticipate what is claimed in the various claims.

Claim 1 for example calls for:

a substrate having a depression formed by a laser; and
at least one electrical conductor track and/or electrode in the depression, the depression having steep walls, sharp contours and a relatively rough bottom surface, the at least one conductor track and/or electrode comprising at least one electrically conductive material for interconnecting electrical components on the substrate . (underlining added)

An electrical conductor track is an electrically conductive path that conducts electrons. It is plain, that the substrate can not also be an electrical conductor, i.e., It must be an electrical insulator, otherwise, the track in the substrate could not function as an electrical path as intended. The path is for electrically interconnecting various electrical components on the substrate. This would be so understood by one of ordinary skill. As stated at page 2, lines 15-22, the component including the

substrate is primarily organic material. Organic material are polymers, i.e., plastics which are electrical insulators.

The electrically conductive material is described at page 5, first and second paragraphs. In the paragraph at lines 16-18, PANI, PEDOT are described as organic conductive materials. The conductors are built, according to one embodiment of the invention, wherein the second layer adapts the work function of the respective metallic conductive layer and the active organic semiconductor layer.

At page 6, lines 11-15, the specification states "Thereafter, the superfluous material is removed and preferably sharply delineated regions in which conductive material is introduced and/or applied are formed together with others, which are free from conductive material (See Fig. A4)" (underlining added) One of ordinary skill would understand that the material indicated to "be free from conductive material" is an electrical insulator.

See also page 8, lines 8-26 for a description of organic materials. This definition is generally for the term organic, if conductive, insulating or semiconductor. One of ordinary skill in view of the specification would understand that the disclosure is directed to an electrically insulating substrate as described throughout the disclosure. For example, in the figure B4, a two layer electrically conductive pair of layers, one of them being metallic, the other being for example PANI, are in the depression as described in the text at page 6, lines 17-32. A highly conductive layer x (black) and a conductive polymer layer y (grey) is in the depression, Fig. 2, B6. The layer y could be PANI or PEDOT.

It would be so understood by one of ordinary skill in order for the layers x and y to form electrodes and conductive tracks, the substrate (the clear unshaded region in Fig. 2 B6) in which the tracks are formed must be the electrical insulation material "free from conductive material." If this substrate were not an electrical insulator, i.e.,

a metal for example, then obviously the entire structure would be an electrical conductor as metals are well known electrical conductors and the so call conductor tracks would be meaningless.

The specification at page 3, lines 10-12, further states that "leakage currents between the conductor tracks and/or electrodes are avoided." Plainly, if the substrate were a metal electrical conductor and not an electrical insulator as in the reference, this statement would not make sense as there would much more than mere leakage currents, there will be a short circuit between the conductor tracks. The specification is construed by and directed to one of ordinary skill. Such a person would so understand the disclosure as described above as being directed to conductor tracks or electrodes formed in an electrically insulating substrate. Otherwise such a structure would be inoperative.

In view of the claim 1 structure, claim 1, as amended, is not suggested or anticipated by Yamamoto, since this reference throughout its disclosure discloses the substrate as being a metal. Thus the depressions and copper particles deposited therein and therebetween can not and do not form electrodes or conductor tracks as claimed, which would be short circuited and inoperative. The substrate in all of the reference figures is a metal.

In Figs. 1 and 8 of the reference, the copper particles 9 are not in the depressions as claimed, but on the peaks between the depressions. These could not possibly form the claimed conductor tracks or electrodes, since they are also deposited on a metal foil substrate.

The reference Fig. 4 shows the copper particles on a flat surface of a metal foil 3. The so called rough surface on the upper opposite side is an additional metal layer on a foil and do not form such claimed tracks or electrodes.

The reference Fig. 11 shows copper particles in the grooves and peaks forming a continuous layer which is contradictory to forming a conductor track. The entire structure is metal and different than what is claimed in claim 1. The remaining figures are equally foreign to claim 1. This reference is so foreign to claim 1 that further comment is not seen necessary. The remaining references cited of record are believed equally foreign to claim 1. This claim is believed allowable.

The remaining claims include similar structure or steps corresponding to claim 1 and are believed allowable at least for the same reasons.

Since claims 1-10 have been shown to be in proper form for allowance such action is respectfully requested.

While no fee is believed due for this paper, the Commissioner is authorized to charge any fee that might be due or credit any overpayment to deposit account 03 0678.

Respectfully submitted,
Walter Fix et al.

by William Squire, Reg. No. 25,378
Attorney for applicants

CARELLA, BYRNE, BAIN, GILFILLAN,
CECCHI, STEWART & OLSTEIN
5 Becker Farm Road
Roseland, NJ 07068
Tel: (973)994-1700
Fax: (973)994-1744

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